

AMENDMENTS TO THE CLAIMS

1.(original) A method of decentralized control of variable frequency drives on a single branch comprising the steps of:

- selecting a control protocol;
- providing a power input branch having a single group installation branch protection;
- connecting in series with the input branch at least two drive branches with the input branch, each of the drive branches having a drive with individual overload protection; and
- transmitting a control signal based on the selected control protocol from the input branch to the drive branches.

2.(original) A method according to claim 1, wherein said control protocol selecting step comprises selecting the control protocol from PROFIBUS, InterBus, DeviceNet, and CANopen.

3.(original) A method according to claim 1 further comprising selecting a maximum rated fuse for the group installation branch protection.

4.(original) A method according to claim 1, wherein said drive branch connecting step comprises:

- connecting a first drive branch with the input branch; and

connecting in parallel with the first drive branch from a load side of the group installation branch protection of the input branch at least one additional drive branch;

wherein said drive branches include a field distributor connected with a drive.

5.(original) A method according to claim 4 further comprising selecting a field distributor based on the selected control protocol prior to said drive branch connecting step.

6.(original) A method according to claim 5, wherein the field distributor has a disconnect switch for load disconnection.

7.(original) A method according to claim 6 further comprising selecting a field bus interface of the field distributor based on the selected control protocol when selecting the field distributor.

8.(original) A method according to claim 4 further comprising connecting at least one of at least one sensor and at least one actuator to the field distributor.

9.(original) A method according to claim 1 further comprising selecting a control input from a programmable logic controller, personal computer, and workstation, prior to said control signal transmitting step.

10.(original) A method of decentralized control of variable frequency drives on a single branch comprising the steps of:

providing an input branch having a single group installation branch protection;
connecting in series at least two field distributors to the input branch, each of the field distributors having a disconnect switch for load disconnection and line protection;
connecting a drive having integrated overload protection to each of the field distributors;
and
transmitting a control signal from the input branch to the field distributors.

11.(original) A method according to claim 10 further comprising:

selecting a control protocol prior to said input branch providing step; and
selecting a field bus interface for the field distributors based on the selected control protocol.

12.(original) A method according to claim 11, wherein said field bus interface selecting step is performed by selecting from PROFIBUS, InterBus, DeviceNet, and CANopen type interfaces.

13.(original) A method according to claim 10 further comprising selecting the drive from a variable speed drive and a fixed speed drive prior to said drive connecting step.

14.(original) A method according to claim 10, wherein said drive connecting step is performed using a plug connector.

15.(original) A method according to claim 10 further comprising selecting a maximum rated fuse for the group installation branch protection.

16.(original) A method according to claim 10 further comprising the step of selecting a control input from a programmable logic controller, personal computer, and workstation, prior to said control signal transmitting step.

17.(original) A control system for group drive installations on a single branch, said system comprising:

- an input branch having a group installation branch protection;

- a first drive installation connected with said input branch;

- at least one subsequent drive installation connected in parallel with said first drive installation at a load side of said group installation branch protection, each of said first drive installation and said at least one subsequent drive installation comprising:

- a field distributor; and

- a motor connected to said field distributor; and

- an interconnecting line connecting said input branch, said first drive installation, and said at least one subsequent drive installation.

18.(original) A control system according to claim 17, wherein said input branch comprises:

- a field bus; and

a power input branch having a power supply connected to the group installation branch protection and a control power input.

19.(original) A control system according to claim 18 further comprising a bus controller connected to said field bus, wherein said bus controller transmits a signal to control said geared drive.

20.(original) A control system according to claim 19, wherein said bus controller is selected from a programmable logic controller, a personal computer, and a workstation.

21.(original) A control system according to claim 19 further comprising at least one actuator connected to said field distributor, wherein said at least one actuator is controlled by a signal transmitted from said bus controller.

22.(original) A control system according to claim 17, wherein said field distributor comprises:
a field bus interface; and
a field distributor connection module coupled with said field bus interface.

23.(original) A control system according to claim 22, wherein said field distributor connection module comprises at least one digital input connector and at least one digital output connector.

24.(original) A control system according to claim 22, wherein said field bus interface is selected from an interface compatible with one of DeviceNet, InterBus, CANopen, and PROFIBUS protocols.

25.(original) A control system according to claim 17, wherein said field distributor comprises an integrated frequency inverter.

26.(original) A control system according to claim 18, wherein said interconnecting line comprises power input branch after leaving branch protection, control power input, and field bus.

27.(original) A control system according to claim 17, wherein said field distributor is connected to said motor via a hybrid cable.

28.(original) A control system according to claim 27, wherein said field distributor has a motor disconnect.